

FIG.1

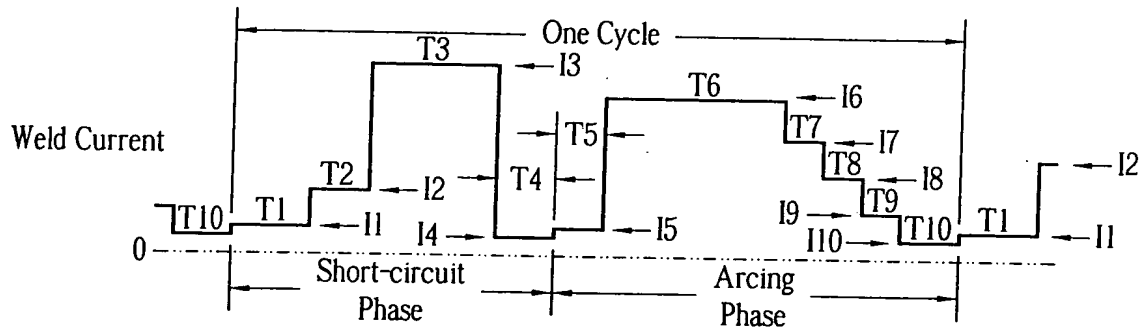


FIG. 2

Segment Number	Current (Amps)	Time (msec)	Trigger
1	I1	T1	T10 (completion)
2	I2	T2	Prior
3	I3	T3	Prior
4	I4	T4	Prior
5	I5	T5	Prior
6	I6	T6	Prior
7	I7	T7	Prior
8	I8	T8	Prior
9	I9	T9	Prior
10	I10	T10	Prior

FIG. 3

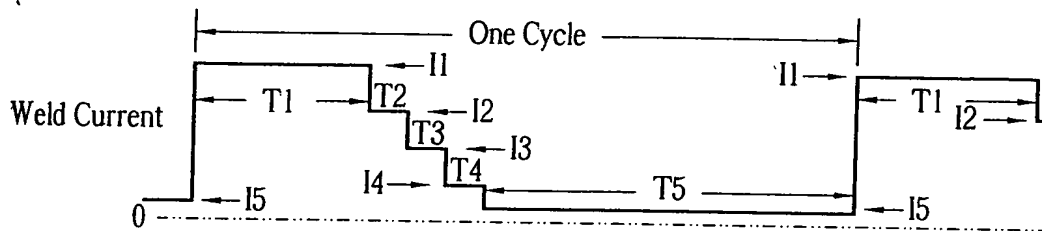


FIG. 4

Segment Number	Current (Amps)	Time (msec)	Trigger
1	I1	T1	T5 (completion)
2	I2	T2	Prior
3	I3	T3	Prior
4	I4	T4	Prior
5	I5	T5	Prior

FIG. 5

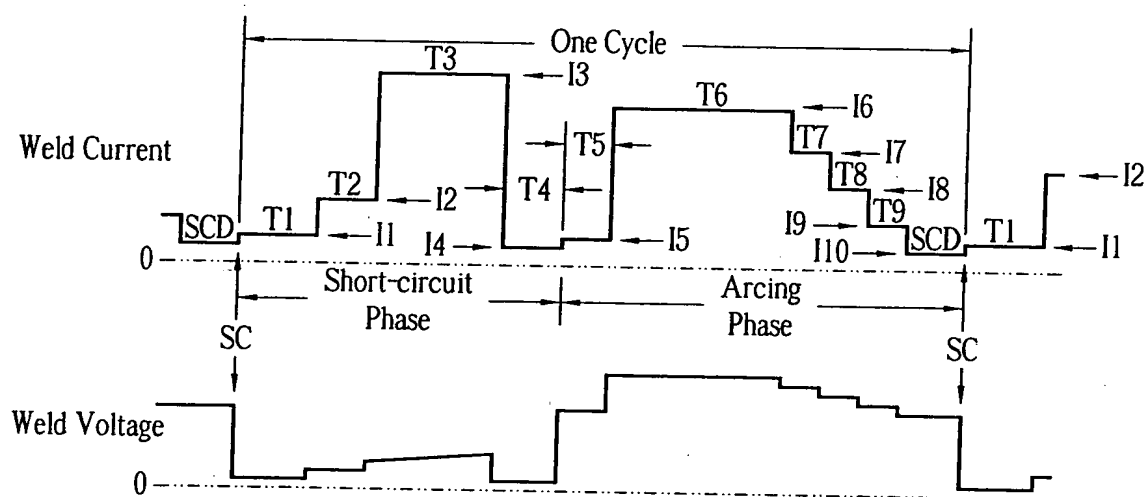


FIG.6

Table 2 — Enhancement 1

Segment Number	Current (Amps)	Time (msec)	Trigger
1	I1	T1	SC
2	I2	T2	Prior
3	I3	T3	Prior
4	I4	T4	Prior
5	I5	T5	Prior
6	I6	T6	Prior
7	I7	T7	Prior
8	I8	T8	Prior
9	I9	T9	Prior
10	I10	SCD	Prior

FIG.7

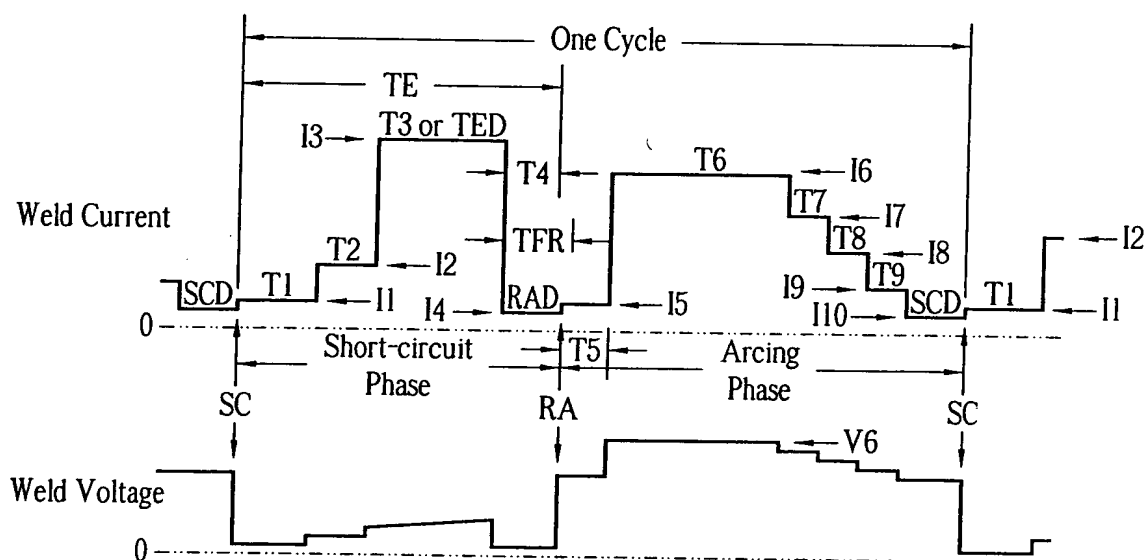


FIG.8

Table 3 -- Enhancement 3

Segment Number	Current (Amps)	Time (msec)	Trigger
1	I1	T1	SC
2	I2	T2	Prior
3	I3	T3 or TED	Prior
4	I4	T4, RAD, or TFR	Prior or TE-T4
5	I5	T5	Prior, RA, or TFR
6	I6	T6	Prior
7	I7	T7	Prior
8	I8	T8	Prior
9	I9	T9	Prior
10	I10	SCD	Prior

FIG.9

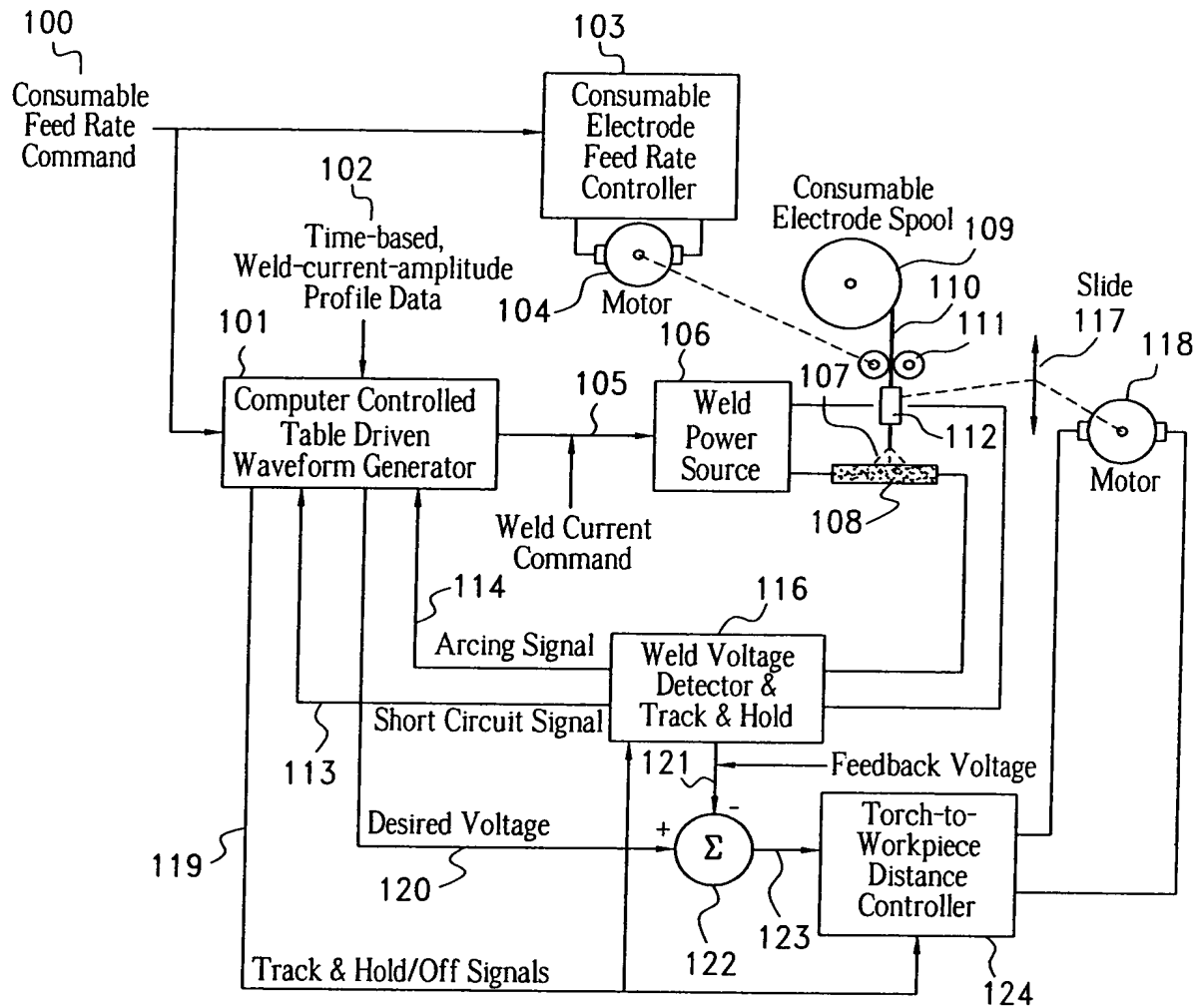


FIG.10

Segment Number	Current (Amps)	Time (msec)	Trigger	Distance Control Voltage(Volts)
1	I1	T1	SC	OFF
2	I2	T2	Prior	OFF
3	I3	T3 or TED	Prior	OFF
4	I4	T4, RAD, or TFR	Prior or TE-T4	OFF
5	I5	T5	Prior, RA, or TFR	OFF
6	I6	T6	Prior	V6
7	I7	T7	Prior	OFF
8	I8	T8	Prior	OFF
9	I9	T9	Prior	OFF
10	I10	SCD	Prior	OFF

FIG.11

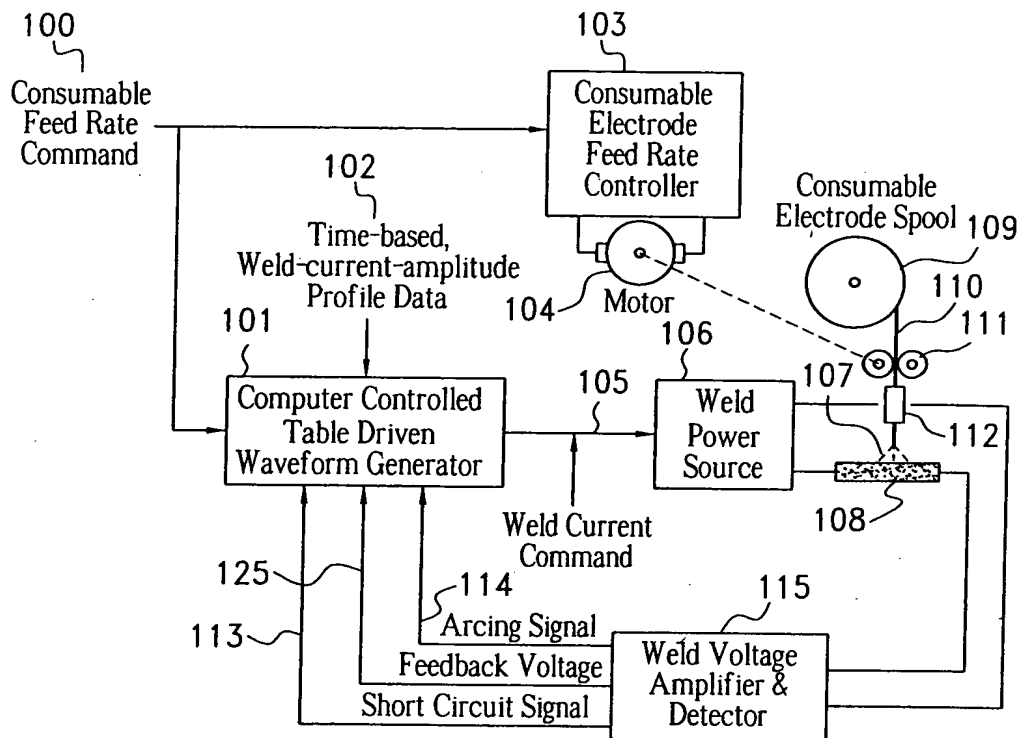


FIG.12

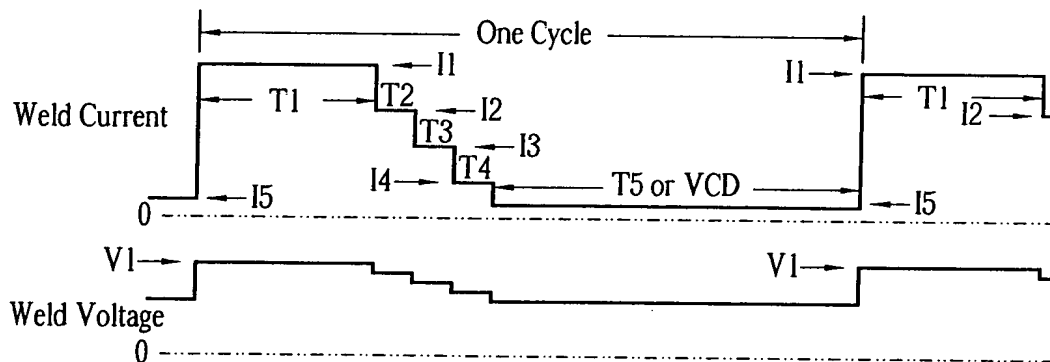


FIG.13

Table 5 – Enhancement 8 for Pulsed-spray Processes

Segment Number	Current (Amps)	Time (msec)	Trigger	Weld Voltage (Volts)
1	I1	T1	VCD	V1
2	I2	T2	Prior	OFF
3	I3	T3	Prior	OFF
4	I4	T4	Prior	OFF
5	I5	T5 or VCD	Prior	OFF

FIG.14